Amendments to the Claims

Claims have been reproduced below for the convenience of the Examiner.

Claim 1 (currently amended): A protective disk for protecting a semiconductor wafer during processing, comprising:

an adhesive layer configured to adhere to the semiconductor wafer, the adhesive layer comprising a high molecular weight polymer, wherein the polymer is soluble in one of the group consisting of: a mildly alkaline solution and a mildly acidic solution; and

a support layer coupled to the adhesive layer configured to support the semiconductor wafer during processing.

Claims 2-3 (canceled)

Claim 4 (currently amended): The protective disk of claim 1 ~~claim 2~~, wherein the support layer comprises a polymer and at least one of the group consisting of:

a filler; and

a reinforcement.

Claim 5 (previously presented): The protective disk of claim 4, wherein the filler comprises one or more of the group consisting of:

alkali oxides;

alkali salts;

transition metal oxides;

transition metal salts;

alkaline earth oxides; and

alkaline earth salts.

Claim 6 (previously presented): The protective disk of claim 5, wherein the percentage by weight of filler in the support layer ranges from 1% to 95%.

Claim 7 (canceled)

Claim 8 (previously presented): The protective disk of claim 4, wherein the reinforcement is at least one of the group consisting of:

a fiber;

a matting;

a platelet; and

a whisker;

and, wherein the reinforcement comprises at least one of the group of materials consisting of:

a glass;

a ceramic;

a carbon; and

a polymer.

Claim 9 (previously presented): The protective disk of claim 1, wherein the protective disk is substantially the same diameter as the semiconductor wafer.

Claim 10 (previously presented): The protective disk of claim 1, wherein thickness of the protective disk is approximately 600μm.

Claim 11 (previously presented): The protective disk of claim 1, wherein the adhesive layer has sufficient thickness to conform to topographical features of the semiconductor wafer.

Claim 12 (previously presented): The protective disk of claim 1, wherein the protective disk provides support to edge bevel of the semiconductor wafer.

Claim 13 (previously presented): The protective disk of claim 1, further comprising:
an intermediate layer located between the adhesive layer and the support layer configured to provide additional properties to the protective disk.

Claim 14 (previously presented): The protective disk of claim 13, wherein the intermediate layer is configured to provide at least one of the group consisting of:

ability to conform to topographical features of the semiconductor wafer; and

enhanced strength of the protective disk.

Claim 15 (previously presented): The protective disk of claim 1, wherein bulk modulus of the protective disk is sufficient to provide strength and stiffness to wafer/disk composite and to provide sufficient suppleness and toughness to prevent brittle failure of the wafer/disk composite.

Claim 16 (previously presented): The protective disk of claim 1, wherein the protective disk is sufficiently waterproof to endure a back-grinding process.

Claim 17 (previously presented): The protective disk of claim 1, wherein the protective disk withstands chemistries used for post-grind stress relief.

Claim 18 (previously presented): The protective disk of claim 1, wherein the coefficient of thermal expansion (CTE) of the protective disk is tailored to correspond to the CTE of the semiconductor wafer.

Claim 19 (previously presented): The protective disk of claim 1, wherein the protective disk is removable by contact with one of the group consisting of:

a mildly alkaline solution; and

a mildly acidic solution.

Claim 20 (previously presented): The protective disk of claim 19, wherein the mildly alkaline solution is selected from the group consisting of:

hydroxides of ammonium; and

hydroxides of potassium.

Claims 21-35 (withdrawn)

Claim 36 (new): The protective disk of claim 1 wherein the polymer includes a functional group selected to impart solubility to the polymer in the mildly alkaline solution or the mildly acidic solution.